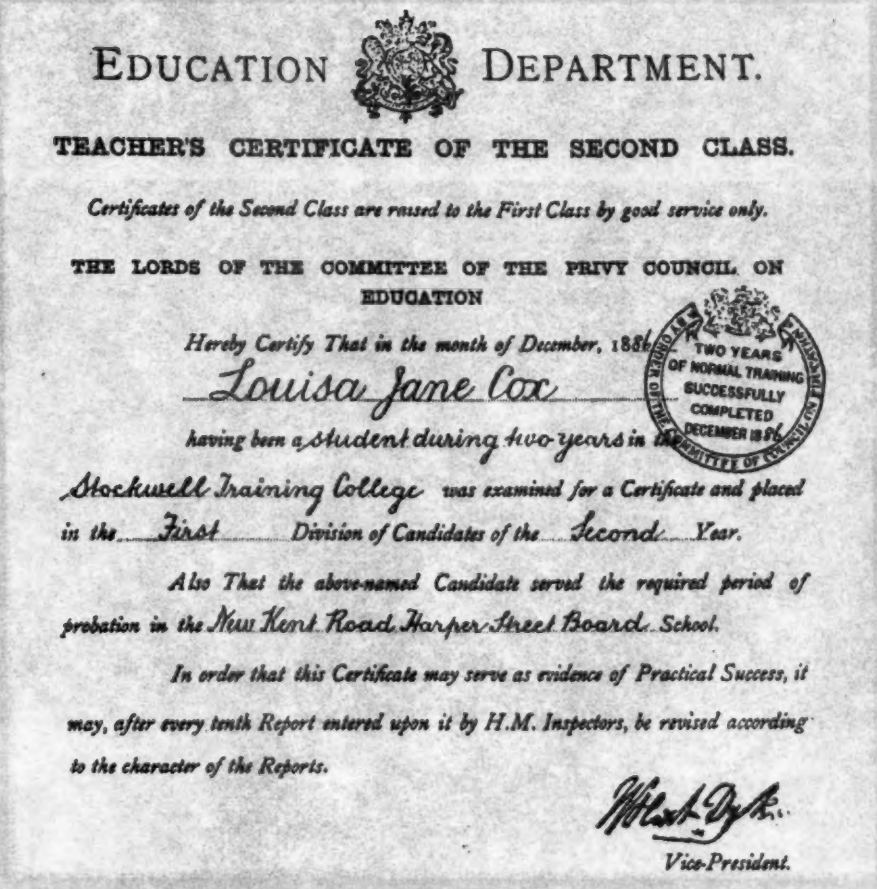
Trends in Education



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Trends in Education

DECEMBER 1975

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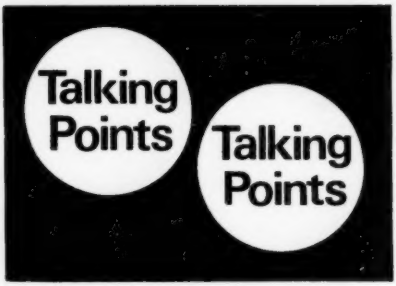


The young teacher

There are more than 450,000 teachers at full-time and part-time work in English schools; all were beginners once. One in every fourteen or fifteen is a beginner this year — this figure is unlikely to change for some time. What happens to the young teacher in his or her first years at work in the schools is perhaps the most important of all factors affecting the quality of public education in the future. The difference (referred to in Margaret Maden's article) between a school where staff confidence and stability exists, and a school without these priceless possessions, is of far greater educational significance than differences in buildings, organization or material resources.

Much more is now being done to help the young teacher than was possible during the very rapid expansions of the 1950s and 1960s. But more can be done. More is understood about the young teachers' problems, and much of this is due to what young teachers themselves have written about their experiences. 'Few people who have not tried it realize how mentally and physically exhausting teaching can be', wrote John Newsom over thirty years ago. The passage of time has not reduced the pressure.

Who is in a position to give practical help to those facing the particular needs and problems of the beginner? Responsibilities for concern over this question are widely distributed. Higher education can be a disturbing as well as a maturing process. Thus everyone who is teaching in universities and colleges has some influence on the specialist abilities and general teaching outlook of those students who begin a career in schools. Those who conduct specific courses of initial training will be expected to equip their students with effective foundations for teaching.

It is increasingly recognized that almost everything depends on successful cooperation with the schools to which students are sent for observation and practice. The LEAs, as the young teacher's employers, act in accordance with their own individual induction policies. In this vital area, the DES is helping to give a lead through the promotion of the pilot schemes described in the articles by Percy Phillips and Colin McCabe. But what is done by the heads of schools and the colleagues with whom the young teacher works would seem to exert the most potent influence not only on the acquisition of insight and skills, but on the basic confidence which contributes most to survival in the classroom.

No one achieves professional competence in any sphere of life at the stroke of a pen, or indeed of any other instrument. The process of maturation is not instrumental but organic. Teaching is a craft which requires time and reasonable working conditions to learn. It is also an art, a kind of mystery into which insight is acquired from example and experiment more than from precept, and from sensitive self-criticism as much as from any external agency, however well-informed. Support for the general conclusions of the James Committee on the planning of in-service training showed how keenly appreciative of these issues educational opinion had become.

We are experiencing a growing concern for the successful initiation of young teachers into the profession of their choice. Much is being done to bridge the gap between preparation for teaching and the realities of the job which confront the new teacher.

Schools are increasingly concerned to incorporate a beginner into a team of professionals who are equally aware of ends and means — the philosophy of the school and the resources at its disposal.

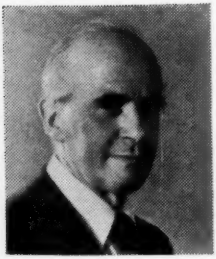
We believe that encouragement as well as information can be had from the four articles that follow. The widespread interest in devising an effective system of supplying the help that a young teacher needs is clearly brought out. The extent of the present pilot schemes and some early indications of success are indicated. (We hope to publish more on this in a subsequent issue.) The efforts of experienced teachers and advisers to consider evidence of the young teacher's problems in one area is described. Here information and imaginative insight are of obvious importance; time and effort to acquire them is demanded of those from whom guidance will be expected.

Finally, a headmistress outlines the means used in a large comprehensive school to help the newcomer. Again this is seen as a matter of understanding the realities of a new teacher's situation and of planning to engage the help of all who can contribute. That this number will one day formally include the pupils is Miss Maden's hope. That pupils do sometimes choose to act with the intention of easing a beginner's difficulties is the happy experience of many teachers.

The young teacher

No one, perhaps, feels less qualified, less secure, than the young man or woman at the start of a new career. The young teacher feels particularly vulnerable. Alone with his class for most of the day — with, like the vagrant, no visible means of support — he often sees ahead of him a lifetime of the kind of difficuties and insecurities he is experiencing now. He will not be encouraged by assurances that time will remove all his uncertainties and make the rough places smooth. All this has become increasingly recognized over the years. The articles that follow explain some of the steps that are now being taken to give young teachers the encouragement and support they have a right to expect.

Helping the young teacher



PERCY PHILLIPS

Mr Phillips is a Staff Inspector at the DES.

The use of the word 'induction' in connexion with the first year of a teacher's active career marks an important change of approach to this crucial period. It shows that there has been a change of emphasis from assessment to encouragement and support; from achievement and finality to continuity and progress.

The James Report was constructed around a theme which presented the professional development of the teacher as a prolonged process in which induction was identified as an important stage. The suggestion that the award of an initial qualification should be postponed until the induction stage had been successfully completed emphasized its importance. This radical proposal reflected convictions that had been growing for a long time amongst those who were most closely engaged in observing the work of new teachers. Almost everyone who was familiar with their struggles and difficulties believed that far more care, support and guidance should be extended to all new teachers. The strong expression of this belief led the Department of Education and Science to invite the Bristol University School of Education Research Unit to undertake a project to investigate the circumstances under which probation was being conducted. A comprehensive and useful report emerged from this exercise which was followed by a second,* to develop new approaches to induction based on the findings revealed in the main report. The James' recommendations thus fell on ground already prepared and were generally well received,

* Bolam, R. 'Guidance for Probationer Teachers'. *Trends in Education*, No. 21.

although there was strong resistance to the suggestion that the award of a teaching qualification should await the successful completion of the first year's work.

New policy proposals

The 1972 White Paper, *Education: A Framework for Expansion,* took note of this qualified welcome of the recommendations for induction and embodied them accordingly in its policy proposals. Briefly, these envisaged a lightened teaching load for the new teacher — not more than three-quarters of a full load — and the equivalent of one day a week to be spent on further training. It also accepted the recommendations that professional tutors should be appointed to support the new teachers in the schools and that professional centres for the in-service training of teachers should be instituted.

To remove some of the uncertainties in launching the scheme, full-scale 'pathfinder' exercises were to be mounted by a number of authorities. In Liverpool and Northumberland this has been done with considerable success. The 'professional tutor' has been renamed 'teacher-tutor', a change which signifies a different concept of this role. A sub-committee, under the chairmanship of Patrick Milroy, Chief Education Officer for Gloucestershire, has been set up by the Advisory Council for the Supply and Training of Teachers. This will be responsible for overseeing the scheme as it develops and will also act as a focus for consultation.

Implementing a national plan

Interest in the scheme is widespread and genuine, though doubts, nurtured by the economic climate, about its financial practicality have cooled some of the earlier enthusiasm. Since the introduction of the White Paper, there have been a great many conferences and working parties, sponsored mostly by the training institutions and LEAs, and these have brought into discussion people from all parts of the school and higher education system.

The role of the teacher-tutor has been the major focus of attention and he has become something of a symbol for the whole scheme. This new being within the profession has caught the attention of teachers generally, though there is no widespread agreement about what he will do, what his standing will be within the school or, indeed, about why there is any need for him at all. Teacher-trainers are much attracted to the idea of such a tutor, since he appears as a kind of bridgehead into the schools, and a channel through which their own influence might penetrate into the post-qualification period. Quite apart from the pilot schemes and in anticipation of their own further responsibilities, a number of local education authorities have experimented in various ways with teacher-tutors, operating from both inside and outside the schools. From the interest and activities at all levels, there seems to be emerging the belief that there is a role for the teacher-tutor

though this will continue to evolve over the years towards something perhaps less dramatic, but more effectively integrated into the ways in which teachers and schools organize themselves.

Flexible arrangements

The early confidence about the role of the teacher-tutor, the training he would require, and the extra training courses for new teachers, has given way to uncertainty on a closer examination of the problem. As a result, the approach to induction has become more tentative and several Area Training Organization/Department of Education and Science conferences have deliberately adopted an investigatory approach with the teachers involved in working parties which are exploring the circumstances of effective induction and early professional development. A confident definition of the way ahead in these matters still eludes us, and there is an increasing acceptance of the need to be very flexible in the arrangements we make. There has, however, been a positive achievement in that in many areas of the country, teachers have been giving active thought to what constitutes the professionalism of the teacher.

The two pilot schemes have launched themselves successfully and there are good indications that they will yield some useful lessons for a smooth introduction of the national scheme. However, anything in the nature of a uniform pattern for the country as a whole is unlikely, as it is undesirable.

Probationers are highly individual in their needs, and schools vary enormously within the free system we operate. Every probationer thus presents a unique demand to his mentors and this clearly makes any generally prescribed pattern of induction quite inappropriate. The scheme is capable of flexible interpretation. There are three elements within it, each of which can be shaped and given an emphasis which will make its overall support appropriate to the immediate circumstances of the new teacher. These elements are the organization of the school itself, which is always a powerful factor in the induction process; the part played by the teacher-tutor; and the content and scope of the extra instruction given.

Good organization

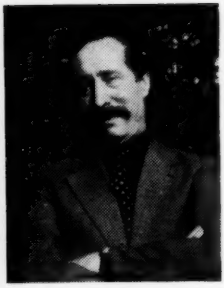
The essential core of the induction process is the day-to-day interaction of the teacher with his pupils within the working framework of the school. Whatever else is arranged on his behalf must be designed to support him in this. The major influence will come from the organization of the school and the part played by all members of the staff, particularly those with whom the new teacher works most closely. Even without the teacher-tutor and the release for extra training, a well-organized school can achieve a great deal for its new recruits and many of them would ask for no more. The presence of the teacher-tutor makes such a supportive organization more likely, and an important part of his work would be to

act as a stimulus for action within that organization; he must certainly not be seen as a substitute for it. The White Paper proposals for induction and in-service training have strong implications for the way a school is run. They require that, in the development of the policy which determines its daily pattern of work and its long-term plans, full regard must be paid to the individual and collective professional needs of the staff. The chief value of the teacher-tutor is that he symbolizes the changed attitude which must accompany this requirement, and can prompt the head and his colleagues into playing their parts. Acting as a catalyst in this way might make him appear rather less than the central figure of the induction scheme, but he remains, nonetheless, an important person in the normal working pattern of the school.

The organization and provision of extra instruction for the new teacher during the periods of release from the classroom are likely to pose more problems than any other part of the scheme. Some of these might arise from the necessity to provide for the particular needs of the individual teacher in a system in which resources and time are limited, and can only be economically and satisfactorily deployed for large groups at once. There are also organizational difficulties for schools and LEAs. These relate for the former, to timetable and staff deployment—already a matter of great complexity in the large school—and, for the latter, to an effective programme of replacement for the teachers who are released. While most people would agree that the opportunities for extra tuition are necessary, new teachers are reluctant to submit to further training, even though they are reassured by, and profit from, regular contact with others at the same stage in their career. Their reasons range from an anxiety to get on with the job, to a reluctance to be separated from the children with whom it is important to establish and maintain a living relationship. It seems likely that the James Committee failed to recognize these complexities in this part of the programme. The pilot schemes and other experiments may suggest some possible solutions, and the problems may appear less acute as school staffing standards improve and the relative numbers of new teachers decline, but it is possible that more responsibility will rest on the schools and on the local teachers' centre than was expected.

The induction scheme will offer yet another example of the need to strike a balance between national policy and local freedom. We must agree on the framework of action which will ensure that the new teacher is effectively supported, but leave the schools and the local education authorities the freedom to match available resources to individual needs within the local context. The success of the scheme will not be easy to measure; induction will only be one contributory factor in the performance of the mature teacher, and difficult to isolate. Where it is effective, professional maturity may be achieved earlier; it will certainly be achieved more happily and confidently.

The pilot scheme in Northumberland



COLIN McCABE

Mr McCabe is Assistant Director, Institute of Education, and a senior lecturer at the School of Education, University of Newcastle-upon-Tyne

During 1974/5, 220 new teachers were in their probationary year, scattered through the county of Northumberland. A pilot induction scheme was set up to see how effectively and economically the proposals of the 1972 White Paper could be implemented in Northumberland's first, middle, and high schools. A preliminary year (1973/4) had already been taken up with consultation and planning.

Evaluation reports were produced as the scheme developed (and are available for those who would like fuller notes) but the keys to the programme were the establishment of the advisory committee (30 members; 15 representing teachers in professional associations, the remainder from the county and neighbouring LEAs, teacher education interests and the induction team), and four working parties to plan induction in each of the main types of school—first, middle, high, and special. The advisory committee was an essential first step in setting up and maintaining the scheme. The working parties, largely composed of head and assistant teachers, met frequently and, with the help of coordinators, were responsible for the detailed planning of the programmes and probably, to a large extent, for their initial acceptance. The working parties would not have been so necessary in their present form if the scheme had been based on professional centres, and have been criticized as being too shifting a base on which to erect a permanent structure. Such a planning organization throws too heavy a load on the coordinating team, which consists of a coordinator, an assistant, a part-time assistant, and one secretary with the chief adviser for the county carrying ultimate responsibility.

The county advisers cooperate with working parties, are consulted by them, and provide or help with out-of-school courses. The working parties could possibly take on, or overlap with some of the advisers' duties; their role therefore needs careful consideration. From Northumberland's experience, there is no doubt that the largely teacher-based working parties have been helpful and have given the lead in establishing this new scheme in which teachers are responsible for induction and professional development. However, their procedures may be too cumbersome, and not linked closely enough with the LEA's normal course structure to

form an adequate base for permanent planning. But they will always be needed for consultation.

The level of induction activity proposed by the White Paper was one day a week, with each new teacher working a 'three-quarter' weekly timetable. Large high schools in the county suggested that they could each provide a full introduction to teaching and in-service work for their own new teachers, as many claimed to have done, but on a reduced scale, in the past. This was accepted, provided that a programme was approved by the county co-ordinator. Deputy heads, heads of department and teacher-tutors were among those given time during the year to meet their school's probationary-year teachers. In the first year, some schools made more effective use of this time than others and new teachers' experiences varied as a result. At least the provision was flexible enough, however, to allow schools to take advantage of out-of-school courses if they wished, and to permit new teachers to consult heads of department or teacher-tutors as seemed appropriate.

All other schools divided 'induction time' so that one half-day each week was spent on induction activity in school, and one week each term on a 'block-release' course or its equivalent. The county had one teachers' centre and three colleges of education (one with a country annexe) under its responsibility but, while ready to use their facilities, working parties were unwilling to invite them to provide courses which they wanted to keep in their own hands. In the event, all but one of the block-release courses were based on colleges, and when it became clear that the coordinator could not carry out his general function in addition to leading the courses, separate course leaders were decided on, the majority of whom came from colleges.

Teacher-tutors and work in schools

Besides 'time out' for probationary teachers, the scheme also involved the appointment of one teacher-tutor in each school where there was one new teacher, and two teacher-tutors where there were more than five. Whenever possible, heads, deputy heads or heads of major departments were not given these short-term internal appointments, and it was made clear that the professional responsibilities of all colleagues towards probationary-year teachers were to remain as they had been, even though there would now be a teacher-tutor to coordinate activities. The official method of appointment was by interview after members of staff had been invited to apply; five day 'preparation courses' were organized for the new teacher-tutors who were then expected to work out their roles during the year.

While it may still be debatable whether, in some types of school, for some new teachers, the appointment of teacher-tutors is essential, this group, during the first year of the scheme, worked effectively, either independently or in cooperation, to explore and

establish their function within the county's schools. They planned the use of induction times, arranging talks, seminars, and visits to other schools, discussed problems and mediated where necessary between new teachers and other colleagues. Most of them clearly felt the need of support from outside their schools and appreciated the day, evening or weekend meetings organized for them, sometimes forming informal local associations for this purpose.

At the end of the year, they felt that they themselves had gained a great deal from what they had done. It is unfortunate, therefore, that only a minority of these experienced teacher-tutors have had new teachers to work with in the second year of the scheme. It seems to have been easier than had been predicted to avoid treading on the toes of head of department colleagues, but some new teachers felt that while the idea of having a teacher-tutor was sound in general, it had not proved necessary in their own case, and that in-school induction activities had tailed off towards the end of the year—a natural consequence if the White Paper's requirements were not taken as prescribing an in-service course.

There are two further problems. The first is whether a teacher-tutor (who, it is firmly established, is not concerned with probationary year assessment) should watch a new teacher at work and discuss his progress with him. This situation arises naturally and easily in team-teaching situations and in some teacher/teacher-tutor relationships, but not at all in others. The other, is the importance of the replacement teacher, especially in small schools, where her personality and ability may be critical in determining the success of the scheme, and in large schools, where all subjects cannot be covered by one person. The cost of this replacement (three-tenths of a full salary for each probationary-year teacher in the 1975/6 year) is the major expense of the scheme.

Out of school activity

The one week block-release courses for new teachers in first, special, or middle schools were experimental 'one-off' ventures involving sessions on basic skills, literacy and numeracy, as well as options to complement college experience, especially in drama, creative activities, and enquiry and integrated studies based on the locality of the centre or chosen surroundings. Each was carefully discussed, evaluated and reported upon. In each case the last one held was by far the most successful.

For secondary school teachers, series of half-day subject courses were arranged in the second and third terms—not without difficulties since their timing cut across school timetables (in 1975/6 all heads were warned well beforehand what afternoons should be left free and in what subjects), and many new teachers had to travel long distances (both time-consuming and expensive for the county). Experience of these was mixed; at one end of the scale was a course which involved afternoons and a weekend and was generally spoken of as being useful and worthwhile; while at the other, was

one which seemed unprepared and a duplication of work done in college so that attendance fell off. This type of course is evidently welcomed by new teachers but needs to be carefully prepared and presented. The appreciation of a two-day course for high school teachers held in the third term led to requests for something similar earlier in the year—possibly regionally based—which would bring together new teachers from different types of school.

Evaluation in the first year involved describing and helping the coordinators to assess progress, visiting people in schools, and interviewing new teachers. Questionnaires at Christmas and in July completed the process.

The teachers' views

The replies to questionnaires from head teachers and department heads (mainly in high schools) showed that generally the induction programmes were held to have been worthwhile. The experimental courses outside the school were most criticized, but 70 per cent of the heads would 'certainly' or 'probably' recommend next year's new teachers to attend similar courses, and a further 19 per cent would 'possibly' do so. There was overwhelming agreement from heads and their senior colleagues, about the value of the 'in-school' periods of the programme.

At the end, it was decided to take some of the questions which had cropped up during the year and put them to the new teachers as a sort of attitude scale—something a little more objective and revealing than a questionnaire. Their responses to a number of these questions point up, I think, the relative success of the scheme in its first year in Northumberland.

IN YOUR FIRST YEAR TEACHING

	First*	Middle*	High*
You should have a lighter teaching load than more experienced teachers	3·04	3·79	4·14
You need opportunities to meet other new teachers	4·45	4·21	4·06
It is helpful to have one person on the school staff who is officially appointed to help you (a teacher-tutor)	4·02	4·50	4·07
You should have opportunities to see other schools at work	4·39	4·30	3·94
You need courses outside school on what you have to teach	3·89	3·78	3·62
Your head of department, head of year, or some other experienced colleague you choose, is likely to be of more help than an official 'teacher-tutor'	2·81	2·43	3·44
No special provision or courses should be arranged for teachers in their first year of teaching	2·07	1·78	1·91

* *Mean scores are given for each type of school*

KEY: **5**=Strong agreement with the statement; **4**=Agreement; **3**=Neutrality; **2**=Disagreement; **1**=Strong disagreement.

Increasing our awareness of the young teacher's problems

HOWARD BRADLEY and JAMES EGGLESTON

Mr Bradley is a lecturer at the School of Education, University of Nottingham
Professor Eggleston is Dean of the School of Education, University of Nottingham

The problems of the induction year as seen through the eyes of the probationary teachers themselves formed the basis of an experiment which we carried out in the University of Nottingham Area Training Organization in 1973. Our aim was to increase the awareness of teachers, advisers, and lecturers in training institutions to these problems.

The experiment had its origins in discussions at the Area Training Organization (ATO) committee for in-service training and curriculum development soon after the publication of the 1972 White Paper, *Education: A Framework for Expansion.* A small sub-committee, set up to discuss what could be attempted locally in response to the White Paper's exhortation to experiment, proposed an ATO/DES course of an unconventional nature in which a major allocation of time was to be given to small-scale research work by course members working in small groups with probationers; to the recording of the difficulties encountered by the probationers; and to the attempts made by the groups to meet whatever needs they identified.

Dual purpose

We had two aims in mind. First, from our experience, we knew that the conclusions about probationers' difficulties, which had emerged out of the enquiry conducted in Bristol by Taylor, Dale and Brimer,* had earned general agreement, but that the problems were always recognized as existing 'in the other fellow's school or LEA, but not mine'. We were also influenced by curriculum development experience which suggested that in-service training is most successful in effecting changes in schools when the teachers feel some responsibility for developing the programme in which they are involved. We hoped to produce a course of in-service training which involved members in discovering at first hand how

* Taylor, J. K., Dale, I. R. and Brimer, M. A. *A Survey of Teachers in their First Year of Service*, University of Bristol, 1971.

probationers felt during their first year of teaching so that the potential for affecting their attitudes would be greatest. Second, we wanted to produce a report and make recommendations which would have the maximum impact and as much reliability as the method would allow.

Time was short as local education authorities needed the information to produce their plans, so the format chosen for the course was a week's introduction, followed by a term of visits to meet probationers in their schools, followed by a week's writing conference during which conclusions were formed and recommendations made. Recruitment of the fifty-six members was by local education authority nomination. Members were appointed in small groups which included teachers and head teachers, LEA advisers, college lecturers and teachers' centre wardens. Each small group was chosen by the local education authority so as to enable it to investigate the needs of probationers in a particular situation. Studies were made of probationers in the following situations: small primary schools; Educational Priority Area schools; large secondary schools; a neighbourhood group formed by a comprehensive and its contributory primary schools; small secondary schools with little support in the probationer's subject. A comparison of young and mature entrants to the profession was also made.

There were two alternatives: to prescribe the methods to be used in the enquiry and the questions to be asked, thus determining the emphasis and possibly to some extent the answers; or to allow each group the freedom to seek the probationers' concerns in its own way, but with guidance where needed. We chose the latter. By doing so we allowed questions to emerge which we could not have anticipated, but at the cost of making generalization more difficult.

The shape of the course

The first residential session followed some introductory reading of extracts from relevant reports. Case studies and video-tapes of probationers at work were discussed in small groups. These brought out the various ways in which different people judge a teacher's performance. Other video- and audio-tapes presented probationers talking about their difficulties in preparation for a day visit to probationers in local schools. In addition, some introduction was given to the skills involved in working with small groups or individuals. Finally, there was some discussion of the DES-sponsored pilot schemes with the LEA officers responsible and of the Banbury School experiment with the professional tutor from the school.

The task during the second week was to reduce the 400 pages of material to a readable, ordered account.* The form which emerged was a brief analysis and summary of the evidence

* The full report, *An Enquiry into the Induction Year*, is now available from the School of Education at Nottingham University, price £1·25.

together with commentaries and recommendations on five particular factors which affect the probationers' induction: the head teacher and the school; the local education authority; initial training; release for probationers; professional tutoring.

The probationer's point of view

For the many advisers, head teachers or heads of department who took part in the enquiry, the exercise of talking to probationers, who were often those in their own charge, brought home the size of the gap which existed between their own and the probationers' perception of the situation. We do not suggest that one side is necessarily right and the other wrong but we are convinced, from what we saw during the enquiry, that the mere recognition of different viewpoints leads to an improvement. It may be worth quoting here typical situations where misunderstanding arose.

Most head teachers were under the impression that a support system existed for probationers within their schools; some probationers, however, even after two terms, were unaware of this system and had to seek help as best they could in other ways. Many probationers had received ten-minute visits from advisers, who were, no doubt, simply being friendly. What they did not realize was that this only mystified the probationers who were worried in case this visit was part of an assessment since they could not see its purpose. Many head teachers did not discuss assessment with probationers to avoid worrying them needlessly, but evidence suggests that this silence had, in fact, the very opposite effect.

The second major observation was that probationers, on the one hand, are anxious to have time to prepare and discuss their plans and to visit other teachers but, on the other, are adamant about being regarded not as trainees but as full members of the staff, which to them means taking a normal class for a normal week.

The probationary teacher relies greatly on help from within the school and it is the head teacher's responsibility to ensure that someone on the school staff familiarizes him with the school system, its curriculum and, particularly in primary schools, its children. The investigators found that the probationers sought help from different people depending on their problem. For example, departmental colleagues were consulted on subject matter (in the secondary school); older members of staff (e.g. deputy heads) were asked about discipline problems, and guidance on personal problems was sought from their peers. These differences highlight the complexities of the job of the professional tutor and, indeed, question the belief that one person could perform such separate tasks.

There was strong support among course members for the idea of a short period of teaching in a school, wherever possible, for

each probationer at the end of his college course. In primary schools in particular, examples were found of 'square pegs in round holes' — probationary teachers in schools for which they had not been trained. Not suprisingly, in many of these cases difficulties followed. Some probationers felt that they were very junior members of staff, which showed that there is obviously a tricky balance to be maintained between overloading the newcomer to teaching and offering him some worthwhile responsibility. Head teachers who were among the investigators expressed the need for training courses to help them perform their management functions more adequately.

In addition to their expressed needs within the school, many probationers looked for help to outside agencies. Secondary teachers in particular saw the specialist subject adviser as a potential source of assistance although, on the whole, they did not understand the pastoral role of the general adviser. In primary schools, probationers expected the adviser to have had plenty of primary school teaching experience. In either case, they hoped for a reasonably lengthy visit during which discussion could take place. Short friendly visits were largely misunderstood.

Probationers were generally unenthusiastic about attending courses in their first year, preferring to remain in the school to master their immediate problems. They did, however, refer to their need for more training in a number of fields, the emphasis being practical rather than theoretical. A number of probationers referred to meetings and discussion groups at teachers' centres and expressed a desire for more of these in preference to the large-scale meetings of a general, introductory nature which were generally disliked. They constantly expressed the desire to visit other schools to see other teachers at work and discuss the practicalities of teaching with them. Course members stressed that these visits needed to be purposive if they were to be useful. They wanted to see directed observation by probationers linked with small-group discussion of their observations in different schools.

College courses

Many of the feasibility study groups asked probationers for comments on their college courses. The answers varied from satisfaction to widespread criticism. A number of deficiencies in the college courses were identified by the probationers. These may be grouped as follows: lack of guidance in dealing with 'discipline' and behavioural problems; lack of training in teaching classes of mixed ability or of less able pupils; lack of information on teaching and assessing examination candidates in secondary schools, especially at CSE level; lack of instruction in practical classroom matters and in routine organizational detail.

There was also considerable dissatisfaction with the unrealistic and artificial nature of teaching practice. Positive recommendations

by the probationers for the improvement of college courses fall into two complementary categories. First, less time should be devoted to the theory of education, especially where this is difficult to relate to actual teaching. Second, there should be a correspondingly greater emphasis on practical teaching. More guidance on method and techniques in specialist subjects should be provided and work should be school-based. There is some evidence to suggest that colleges should give more advice to their students about the type of school to which they apply. However, many of the probationers had social and geographical reasons which dictated their choice of a particular school; mature students, especially, were rarely free agents in this matter.

There appeared to be widespread fear and ignorance among probationers about the assessment procedure. Most of them knew little or nothing about how they were being assessed, or on what criteria. In many cases, ignorance of the assessment process threatened the probationer's relationship with those best placed to help him — his head teacher and visiting advisers. Finally, probationers felt that the person designated to be their adviser should not be concerned with their assessment. Indeed, probationers showed some antipathy to being assessed at all and were not convinced that a professional tutor was the answer to their problems.

Meeting probationers' needs

After consideration of the advantages and disadvantages of various support and release models the report (*An Enquiry into the Induction Years*) makes recommendations on the basis of the findings of the groups. For example, in considering the use of the one-fifth of the working time during which a probationer would be released from his duties, four possible models are considered:

Periods of free time distributed throughout the week equivalent to one-fifth of working time;

One fixed day every week;

The accumulation of the one-fifth free time to be used for block release of one week or longer;

A proportion of the time to be used in school, the rest accumulated for block release.

To choose any single system of release would be naïve and inefficient. Instead, the particular need and situation of the probationer must be related to the most useful release pattern.

Similarly, in dealing with the question of professional tutelage, the report sets up various models for professional tutoring and their advantages and disadvantages are tabulated. It favours a specialist professional tutor for large secondary schools, and sets out a role definition which is that of coordinator and consultant,

working with and through the heads of department. In smaller secondary schools, the role is seen rather differently; here the tutor is a young teacher with a support role, and other responsibilities are undertaken by the head teacher and head of department. In primary schools, the report sees most effective support coming from a team of practising teachers, on a part-time release basis, working in the small local group of schools in which they teach.

Other questions examined include the support necessary for probationers before their teaching begins, the head teacher's role in the first few weeks, the timing and nature of visits by advisers, and initial training and support for probationers through courses in teachers' centres and elsewhere.

The impact of the course

At the end of the second week, course members were asked to make an evaluation of the exercise. On each of the counts considered, the course was rated well above average. Members found the degree of involvement most pleasing, particularly through the small groups with their wide cross-section of the educational service. Highly rated were the depth of the discussions and the way the course had opened their eyes to probationers' problems. There was a great deal of satisfaction with the term spent working with probationers; some felt that they could have done more to help the probationers if more time had been available and if that particular part of the course had taken place earlier in the school year. Both these points had been anticipated by the course planners, but had been accepted as unavoidable on the timescale then applying for the introduction of the full induction year scheme. There was most disagreement over the final writing process. Some felt a sense of achievement and enjoyed the urgency; others disliked the pressure of work which built up during the writing week. A few members regretted that a structured series of questions had not been imposed on the group from the beginning. While recognizing that this would have made the report writing easier, the course directors would nevertheless still resist the imposition of such a fixed structure on the grounds that it would have reduced the effectiveness of the studies as an exercise in in-service education. Some course members would have liked the final report to have contained the reports of all the studies. These are available for study by interested parties, but it was felt that a report of such a size would discourage the ordinary reader.

Evidence of the impact of the course already exists. Several of the groups have continued to meet this year with new groups of probationers. Some of the colleges of education involved have already modified their work to meet the points made on the course, and modifications to school and local education authority approaches have also taken place as a direct consequence.

The young teacher in the secondary school

MARGARET MADEN

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Generalized prescriptions as to how teachers can be supported in their first year are of limited use.* However, the precise context of a given school, its policies, its staffroom politics and the characteristics of the pupils, have a considerable effect on the success, or otherwise, of the induction period. I asked staff in my own school during a one-day conference in my second month there (April 1975), what were the issues or problems which required attention in terms of an overall school policy.

One major item reported to me was the problem of supporting probationers, and even experienced teachers, who were new to the school. Allied to this *cri de coeur* was an overall demand for a coherent educational policy for the school — a reasonable need it seemed. The ravages of a recent history of staff turnover, staff shortages in key departments, and a resultant parade of supply teachers (described as the 'plimsoll brigade' by a more experienced colleague), had left a considerable mark on both staff and pupils. Therefore, the definition of a clearer working context for considerable numbers of new and usually inexperienced teachers emerged as our first priority. This pen-sketch of the particular conditions in my school is necessary because it contrasts sharply with my previous experience at Bicester School in Oxfordshire where not only was there staff stability but also a sense of confidence in innovation, in ideas from outside, and in newcomers. This was the result not merely of staff stability but also of a conscious school policy.

However, the changes in the staffing situation in London schools following Houghton, and a general economic recession, have altered the context in which a staff working party is presently grappling with the matter of support structures for new teachers, especially those in their probationary year. This altered context is not, I imagine, unique to us, and it must necessarily ameliorate the problems we face. For example, last year at Islington Green, there were eleven probationary teachers while this year there are

* For a detailed exposition, in so far as this can be done, of the problems faced by most teachers in their probationary period, see *London Educational Review* Volume 4. No. I, Spring 1975. London University Institute of Education.

three. The remaining eight teachers recently appointed to us are experienced and were selected from a considerable number of applicants.

Needs of the probationer

It is, by now, well known that the school has to impose some order on the mass of complex and contradictory elements of knowledge and skill required by the new teacher. Basic survival knowledge of an apparently trivial order, such as access to keys, to stationery, to a film projector, to 'free dinner' lists, can in themselves be overwhelming to the uninitiated. There is, for the teacher as well as the child, the 'hidden curriculum' of the school — the informal as well as formal mysteries of the hierarchy. The power of the schoolkeepers has to be 'sussed out', as have the political and geographical empires of the staffroom. Then there is the 'front line' of hundreds of adolescents to cope with ('teaching', I suspect, comes later). The pupils possess more information about the realities of school than the new teacher. He will not have formed his 'teacher identity' on short teaching practice periods at college, and this struggle — and I do not believe that is too dramatic a term — consumes a massive amount of mental and emotional energy.

The young teacher faces a more difficult task in this respect than I did in 1962. It is no longer a matter of assuming implacable sternness with children, quickly followed by a joky *bonhomie* in the staffroom, followed (if still human) by a more personal self at home. Not only is it desirable, it is now also essential, to develop one's personality in an authentic way with young people in schools. More self-awareness and a greater emphasis on variable forms of relationships with adolescents should be consciously promoted during the initial training period.

Support from the beginning

At Islington Green, we try to provide the new teacher (whether still at college or in some other school) with a positive and realistic view of the school at the appointment stage. Interested applicants are asked to visit the school informally before any interview. During this day, the potential applicant spends time with other teachers in the relevant department and is shown around the school by children. The way he or she relates to the teachers and children is also helpful to us at the later short-listing stage. Notes on the school and a job description are provided, and it is made clear that many of our pupils are disadvantaged and that they demand patience and warmth as well as a great deal of carefully prepared teaching.

At this stage, and at the interview, we try to show that we are colleagues working together, and with the children, in a way in which mutual respect and fairness operate. I firmly believe that new ideas and approaches represent a bonus for the school, and

that the student on teaching practice and the new teacher should be made to feel that he or she is welcomed on this basis. Towards the end of the summer term we hold an 'induction day' for all new teachers, to provide them with information on how our particular system operates. A comprehensive staff handbook is provided beforehand. The particular social context of our neighbourhood is considered, and a simulated case conference between our education welfare officer, deputy head and year head demonstrates a range of critical social problems which regularly impinge on our work with individual children. The informal aspect of this day is equally important. The buffet lunch is an occasion when representatives of the governors, parents, and professional associations meet the new staff, who begin to experience the variety of relationships existing in the school. A considerable amount of time is also spent in discussing with departmental heads the new timetable, the teaching materials, and the syllabus. The new teacher will usually be responsible for a tutor group (or share one with a more experienced teacher) and the aims and strategies of pastoral work are thus discussed in a specific context.

The importance of middle management

Much of this preparation during the period before starting work relies upon 'middle management' understanding and implementing the school's policy. Heads of department and year heads discuss their roles in the early part of the summer term and publish their role definitions in the Staff Handbook. Clearly, some teachers will achieve more than others, especially in a school where, for several years, so many of them have had to simply survive in personal terms. Frequent changes of staff at lower levels has had a debilitating effect on these longer-serving teachers and a 'siege mentality' has developed. Opening out to the strengths of newcomers and finding ways of capitalizing upon these strengths is a new challenge, and frequently an extremely difficult one. Nonetheless, the support offered by the head of department and the year head is crucial. A helpful, supportive tone set by the head and senior staff is meaningless unless it is more precisely echoed by those teachers directly responsible for the day-to-day progress and security of the young teacher. This can operate in a variety of ways. Most obviously, the head of department can occasionally visit the classroom (where time allows) and before confrontation arises, demonstrate to the children that he is interested in their progress with the new teacher; even if team-teaching is not operating in any formal sense, nonetheless the department works in other ways as a team. This is, of course, a delicate operation which, handled insensitively, can give the impression that a rigid hierarchy is at work, observing the new teacher and not the children.

College or education department training rarely provides the young teacher with any sense of the long-term planning, or of the

sheer staying-power needed, so that the pacing of such demands frequently looms large among the anxieties of the first year. Regular departmental meetings help enormously in this respect, and these should be occasions when collaborative planning and preparation of materials proceed. We have timetabled departmental meetings which take place in a weekly staff meeting period of one hour (many continue longer than this), and the head of year also meets his or her tutors regularly.

Pastoral work is frequently quite new to the young teacher as, curiously enough, this increasingly important aspect of working in schools is not adequately dealt with in most training courses. It would be convenient if school rules were available and, more importantly, universally applicable. Reasonable standards of behaviour are being discussed by a staff working party on 'The Role of the Pupil: Expectations and Obligations'. Many young teachers are confused when one experienced teacher allows children to chew gum in class, whereas another will not. Similarly, and more difficult, what from one child or by one teacher is considered 'insolence' is ignored in a different context. We have a responsibility to clarify these matters for the sake of the young inexperienced teacher. The head of year, in particular, is in a strong position to help the uninitiated by providing detailed information about the children so that our different expectations of them are related to highly varied personal and home circumstances. Similarly, particular skill and sensitivity are required when a teacher wants to visit the home of a child. Unless a complex and serious situation exists requiring the services of the education welfare officer or social worker, a simple and friendly visit by a teacher is useful. This may arise from a homework or rare truancy problem, or may relate to the young teacher's wish to 'get to know' the parents of his tutor group. The head of year has the responsibility of advising the young teacher in this, discussing with him the courtesies involved and the recognition of the school's 'boundaries' in making such a visit.

General support system

A more general support system for the probationer or new teacher is, as yet, undecided. The working party studying this problem recognizes that while both categories (new, but experienced elsewhere, and probationer) share problems of initiation and adaptation, the probationary teacher's problems are more acute because he is learning to adapt to a professional role as well as to a given school. The senior master holds voluntary monthly meetings for all new teachers. These meetings are sometimes based on points raised by the new teachers themselves, and on other occasions are led by different teachers on specific topics such as mixed ability teaching, 'discipline', or the writing of school reports. Apart from the intended item of business, the introduction of other teachers

as discussion leaders introduces an element of 'boundary-crossing', and the undesirable 'oasis' syndrome of the department is reduced.

It is being increasingly recognized that the young teacher perhaps requires a counsellor in the system, since no matter how friendly and approachable the senior master may be, he stands, nonetheless, firmly at the top of the hierarchy and is primarily responsible for compiling the final assessment at the end of the probationary period. The work of Ray Bolam and his team in Bristol* has drawn our attention to this problem of the incompatibility between the assessor role and confidant role in the one person, especially when that person is a senior member of staff. My own reservation on this is twofold. First, problems raised by a probationer can often be resolved (e.g. lack of access to stock, a thwarted desire to develop a new scheme of work which should be encouraged), and the power to do this usually resides with senior staff, especially those above head of department or head of year level. If the counsellor-teacher is appointed specifically because he is *not* from the ranks of senior staff and acts as a mediator, then he must have access to a fairly immediate source of power, and confidentiality may have to be broken. I do not believe that these 'political' problems are insoluble, but they do present us with considerable difficulties. Allied to this, I am personally sceptical of the longer-term implications of separating the 'honest confessional' from facing up to the need to develop the skill and confidence amongst all teachers to cope with hierarchy and power. In other words, I think we should help young teachers to make proper demands of senior staff, whose job it is to make the teacher's task satisfying and efficient. Hence, discussions with the senior master would form the context in which these 'proper demands' could be formulated. The constraints under which we operate could be immediately discussed, or, if possible, reduced by virtue of executive power. The second reservation I have on this role separation is an unwillingness to promote a further proliferation of 'office-holders'.

In the Inner London Education Authority, schools are required to advise the district inspector on the performance of both probationers and London first appointments (who may have had years of teaching experience elsewhere), and he subsequently writes the report. I rather dislike this system, although I can see that it could protect the new teacher from the worst excesses of unsympathetic heads. However, whatever is written about a new teacher in my school is shown to, and signed by, the teacher concerned. As with students, we try to compose these reports carefully and make considerable efforts to define both strengths and weaknesses. This is based on the assumption that we can all learn more about the craft of teaching, and so the report should ideally provide the young teacher with both a sense of achievement and fairly specific 'ways

* Teacher Induction Pilot Schemes Project, University of Bristol School of Education, Educational Research Unit.

forward'. I personally would like to use the children in this procedure, but the realities of professional life make this, at present, untenable. The young school student is a tolerant judge of his teachers and frequently reveals an imaginative and perceptive understanding of teachers' techniques and abilities. Such involvement would also help the pupil towards a more sensitive appreciation of school problems whether class size, differential abilities of pupils, or the lack of satisfactory equipment or teaching materials.

Much is being written about the induction year and beyond, and the limited pilot schemes following the James Report's idea of the 'second cycle' will presumably reveal more about this crucial initiation period. However, in the educational world, a year is a long time, and the past year has dramatically altered the scale of the probationer teacher problem, if not its quality.

Perhaps this journal should study more thoroughly the problems associated with those older teachers who, because of changing demands in comprehensive schools, will need their own form of induction.

Changing expectations amongst pupils, the 'knowledge explosion' in terms of both the disciplines and pedagogy, as well as the increasingly collaborative approach required from staff and pupils, all require urgent attention in terms of retraining.*

* The views expressed in this article are not necessarily those of the Inner London Education Authority.

Courses for school governors

JOHN MANN

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The role of school governors and the development of school government has already been discussed by Anne Corbett and R. T. Spooner. This article is a further contribution to the debate and describes the measures that have been taken by Sheffield Education Authority.

In commenting on the implications of going comprehensive, Mr. R. T. Spooner (TRENDS 1975/2) argues that the change from grammar to comprehensive schools spells the end of authoritarian headship. Beleaguered by pupils, staff, and parents, the head has only one line of defence left—his governing body.

However, his vision of the membership and role of the governing body raises at least three major questions. First, whether Mr Spooner is perhaps self-contradictory when he talks of a bridge between the head and the education committee. Second, whether Mr Spooner has thought out the practical implications of suggesting that 'local councillors should remain the backbone of governing bodies'. Finally, when he asserts that the governors' role is to represent the needs of the school to the education committee, it would be interesting to know how Mr Spooner intends to equip his governors to recognize and assess the school's needs. Or does he expect them merely to pass on what the head has told them?

Anne Corbett's vision is entirely different (TRENDS No 36). Governing bodies should 'represent all those who have a direct interest in the way the school is run'. For her, the 'governors' role lies in integrating the various interests connected with the school . . . The school should do all it can to educate its governors', who . . . 'should not have to rely for all their information on the head'. Whereas Mr Spooner seems oblivious to the governors' need for help in doing their job, Anne Corbett draws attention to it, and indicates some ways in which it might be met.

The Sheffield situation

The Sheffield Education Authority shares much of Anne Corbett's thinking about the membership and role of governing bodies. Like her, it recognizes that governors need information to do their job properly.

When Sheffield reformed its system of school government in 1970, the most important change was to widen its membership to include all those with a direct interest in the way the school is run

— the local authority, parents, pupils (though until this year they were eligible only for cooptative membership), teaching and non-teaching staff, the immediate community served by the school, and other associated schools or colleges.

Because of their varied background, governors come to a school with varying degrees of knowledge and understanding of the national and local education system, the local government system, the policies and working of our own Authority, and the immediate setting of the school. Because some of them have only had experience of one school they found it difficult to know whether its problems were common ones or simply peculiar to that particular school. The Authority hoped that governors would draw the Education Committee's attention to problems and difficulties, yet would understand enough of the Committee's own problems not to be unduly cast down if it could not meet a request for help. The Authority also asked governors to strengthen the school's links with its local community, between school and home, and with associated schools. To do this effectively, governors needed to know something of the Authority's policies for community and campus schools, its views on relations with parents, and its plans for primary and secondary school reorganization. Governors were also asked to support their school, and to promote its welfare and development. They therefore needed some understanding of the school's philosophy and policies. The Authority also encouraged them to contribute to the discussion of policies and objectives, and advised its heads to help governors to develop a thorough understanding... 'which will make them valuable confidants for a head, or people whose judgement he can trust in testing proposals for future developments'.

Sheffield would certainly go along then with Anne Corbett's view that 'the school should do all it can to educate its governors'. Many heads have reported fully on the school's policies and aims: some have encouraged members of their staff to come to talk on particular aspects of school work and organization, others have summarized the arguments on major educational issues. Some schools have successfully involved governors in visits, fêtes, extra sewing classes, and various out-of-school pursuits and fund-raising activities, so that they might gain a live appreciation of what their school is trying to do and the problems it has to overcome.

The Authority also contributes directly to governors' meetings which are all clerked by officers from the Education Department, including the Authority's advisers and the senior assistant and deputy education officers. Periodic meetings are held to brief the clerks on certain general matters, but otherwise, many are able, by virtue of their usual job, to contribute on educational matters and the working of the local authority. Beyond this, the Authority is also trying to include at least one major discussion paper on the agenda of each termly meeting. So far, these have included a

provocative Green Paper on school uniform, a summary of the Burstall Report on primary school French, and a commentary on the Bullock Report.

A series of area meetings, arranged by the Authority and attended by senior members of the Education Committee, took place in the autumn. Designed to relieve the feeling of isolation from which some governors suffer, they brought together the governors of different schools to air their common problems. These area meetings provided for a meeting of minds, diverse in their experience and views, but united in their concern for education.

Provision of courses

The Authority's acceptance of the legitimacy of different views, and the need for dialogue, led it to establish representative governing bodies in the first place. The same attitude has influenced its approach to training governors. Rather than developing its own orthodoxy, it has been happy to associate with the extra-mural department of Sheffield University in providing courses for governors. The courses consist of ten evening meetings and have been held each autumn and spring since 1972. Dr W. A. Hampton and Dr W. Bacon, of the extra-mural department, contribute talks on the education system, the development of public participation in local administration, the school as a community, and the school and the community, while officers of the Authority talk on education finance, the role of governors, and current educational issues and policies. The Chairman of the Education Committee addresses each course about the future of education in Sheffield.

The topics covered, however briefly, show fairly clearly the thinking behind these courses: that governors would find it most helpful to have an overview of the education system, educational issues, and local policies. This would provide background for discussion of the problems of their own schools. Most of the courses have been well supported, with up to fifty enrolments and attendances averaging 70 - 80 per cent. There have been few drop-outs, despite some comment that the courses are too theoretical and remote from the practical problems which face schools. Among these problems are the perennials — accommodation and building maintenance. In response to the interest shown by previous course members, the course has twice included talks by the general manager of the works department which does all our maintenance and repairs.

Apart from the comment by one or two old and experienced governors that the course had nothing to teach them, the most persistent criticism, levelled by head teachers, has been that some of the talks were an invitation to governors to attack and undermine the head's position. An attempt to redress the balance by including one talk by a head teacher was not entirely successful, perhaps because the course then included separate, contrasting

views, and not a single discussion of the head's role. Perhaps, simply because they are theoretical, the courses have thrown into starker relief the problems of leadership in a participative community.

Despite their success by the normal criteria of enrolment for adult classes, the courses also illustrate the problem of communicating with such an extensive group as school governors. After allowing for overlapping membership, Sheffield has about 2,500 governors, with fairly frequent changes particularly of parent representatives. At present, the courses cater for about ninety or one hundred governors a year. So far, most courses have been held at the teachers' centre which is near the city centre and readily accessible. Courses arranged in other parts of the city by the extra-mural department and the National Association of Governors and Managers have not been very well supported, though such courses might perhaps consider the more local and practical problems of groups of schools.

The potential conflict between a governor's specific commitment and his contribution to education generally has also been brought out by a suggestion that courses be arranged for parent-governors or for pupil-governors. The Authority's view is that courses for particular classes of governor would tend to be divisive, and would justifiably be regarded as more threatening by teachers.

For several years, the present Sheffield Education Authority and its predecessor have been committed to developing an open system of comprehensive community education. In this system, the development of campus adult education, the planning of school reorganization and catchment areas, the development of school government, the development of special education, and many other matters, have increasingly become matters for discussion by the students, the parents, the teachers, and other employees most directly involved. Our experiment in training school governors should be seen in this context as a way of helping a few people to contribute to such a participative system.

Mathematics in primary schools

R. L. JAMES

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In a study by HM Inspectors of the mathematics taught in the primary schools of three different areas in Wales, it emerged that, although there were differences in detail, there were enough similarities for some general conclusions to be drawn about the content of work and the lead given to teachers in the planning of their schemes.

In a study of mathematics teaching in primary schools in three different areas of Wales, HM Inspectors discovered that in two of the areas studied, and in a major part of the third, selection at 11-plus takes place, though in only one instance does a mathematics test form part of the selection procedure. This has a bearing on the content of the work and on the lead given to teachers in the planning of their schemes. The means by which the teachers receive guidance differed in each of the three situations studied. In one area, the scheme for primary mathematics was produced by the local education authority's adviser in response to requests from teachers for advice on new developments in school mathematics. In the second, it resulted from the deliberations of a panel of primary teachers working in close cooperation with secondary school mathematics specialists; the syllabus produced in this way is now followed in every school, since the 11-plus mathematics examination is based on it. In both cases, useful suggestions on teaching methods were provided, including advice on textbooks and the use of various learning aids. These schemes have undoubtedly had a beneficial influence in that they provide teachers with a valuable framework within which to work at a time when mathematics teaching is in a state of flux. Pupils are given a balanced programme of work which provides an adequate basis for further study of the subject. Some schools have supplemented the LEA guidelines with schemes of their own; the most comprehensive include notes on the aims of mathematical education in primary schools, suggestions on classroom organization, lists of reference books, textbooks, work cards and equipment. They provide the means of achieving an orderly and sequential treatment of various topics.

In the third area, a LEA scheme of work had not been produced as it would have been very difficult to formulate one to suit every

school. Head teachers in this area were also reluctant to provide written guidance on the mathematical curriculum, on the grounds that it would restrict the work in the classroom. Consequently, only three of the ten schools visited in this area had detailed schemes. Although some gifted teachers revelled in the unstructured situation, the work in those schools which did not have a scheme of work was mainly textbook-based, and, therefore, on the whole, more restricted than in those where detailed guidance was available.

The 11-plus examination based on the LEA syllabus does, however, impose restrictions on the nature of the work undertaken at many schools. The programme for older pupils in these schools is generally restricted to the more readily examinable aspects of the curriculum; practical and exploratory work is, consequently, postponed until after the 11-plus examination.

Curriculum content

Whereas it is true to say that the mathematics curriculum in all areas has broadened to include some non-numerical ideas, the extent to which changes have taken place varies considerably from school to school, though naturally there is a greater uniformity within the area where the 11-plus examination is retained. Methods of approach differ even more widely as there is a great deal of classroom autonomy. The curriculum of most schools now includes practical measurement (length, area, volume, capacity, weight, time, temperature, and angles), some geometrical ideas through the study of shape, elementary ideas on sets, and pictorial and graphical representation. The mathematical diet of some pupils, however, still consists almost entirely of computation. There was very little evidence that this aspect of the work was being seriously neglected at any school. In fact, considerable emphasis was placed on arithmetic in most schools, though competence in this was not always achieved with understanding, as there was a tendency for techniques to be taught in isolation from their application, and for insufficient attention to be given to developing skills in relation to a child's experience. Rarely were arithmetical processes developed in association with solving real problems, nor were suitable methods evolved in discussion with pupils. In many instances, insufficient attention was given to establishing basic ideas before introducing standard techniques which often conceal the underlying principles.

Practical activities and associated numerical calculations on length, area, volume, capacity, weight, temperature, and angles are undertaken in all schools, but the amount of practical work varies considerably from school to school and diminishes as pupils progress through the school. There is a tendency in many classrooms for practical work to take place in isolation from other mathematical work, even to the extent of having different times set aside for it. Measuring activities are then seen as light relief from the daily grind of mechanical arithmetic, rather than as part

of a cohesive mathematics course. This separation of practical and 'formal' mathematics makes it difficult to take full advantage of the opportunities which measuring and computing in measures provide in extending the number system and developing an understanding of operations with fractions and decimals.

Similar pattern

Most schools followed a similar pattern in activities associated with length, area, capacity and weight. There are normally four stages:

1. Comparisons: two objects are matched but not actually measured.
2. Non-standard units: measuring the length of a room in paces, a desk top in spans, or amount of water in cupfuls.
3. One standard metric unit.
4. Two standard metric units or a unit and a decimal fraction of that unit.

The first two stages were covered mainly at the infant and lower junior stage. These stages are important from the point of view of concept formation and require a great deal of discussion amongst pupils, and between teacher and pupils. This interaction did not always take place and, unfortunately, many schools were too hasty about arriving at the third or even fourth stage. Area was a concept not fully understood by many older children; it was perhaps significant that this aspect did not receive much attention in the early stages. There was, in many schools, a lack of progression in practical activities, especially those concerning weight and capacity; first and second year juniors were often engaged in exactly the same activities as infants in the same school. Too frequently, practical activities were seen as ends in themselves, and the mathematical principles illustrated by the activities were not abstracted.

Estimation of various measures figured prominently in courses. Pupils in a few schools were provided with opportunities of making and calibrating measuring instruments to make them aware of the approximate nature of measurement, and of the need to choose suitable units. The early work on angles, in some schools, was very good, with experiences provided to help develop the concept of measuring the amount of turning, as well as considering an angle from a 'static', corner point of view. In many schools, however, the rotational aspect was under-emphasized with the result that very few older pupils had a clear conception of an angle, though they took part in sophisticated exercises involving angles.

In most infant schools and departments, pupils were given opportunities to manipulate a variety of two-dimensional and three-dimensional apparatus (commercially produced equipment as well as common household materials), illustrating a variety of shapes and sizes. Activities such as junk modelling, making tan-

grams, and experimenting for tessellation involved children in a great deal of creative work, as did activities with geo-boards and elastic bands at a later stage. (It was particularly pleasing to see excellent work of this kind produced by some less able children.) There was a considerable awareness of the properties of common shapes by the top infant stage, and mathematical vocabulary was generally well developed.

Ideas on symmetry were developed from an early stage, with reference to natural and man-made objects. The work on symmetry was, however, restricted to two-dimensional line symmetry, which was not always fully exploited when investigating properties of various shapes. Very little work was done on paper folding and cutting, and generally, the emphasis with older children was on absorbing geometrical facts, rather than continuing the investigatory approach used with younger children.

Visual element

The use of the visual element to help the development of abstract ideas had been extensively introduced into the schools. Pictures and graphs were used in all schools to display and compare information so as to make it more easily assimilable. These representations, together with the art forms associated with geometrical shapes, contributed greatly to the attractive mathematical displays in evidence in nearly all the classrooms.

Overall, a wide variety of representations was seen, but, within individual schools, the nature of the enquiries undertaken and types of illustrations used were often very restricted. The tendency was to move on too soon to abstract representations such as block graphs. Having prematurely reached this stage in top infant classes, there was often very little progression throughout the junior stage, apart from a few pie charts and temperature graphs. Only a few schools had developed graphical work to illustrate relationships and trends.

Some attempts had been made to link mathematics with other aspects of the curriculum (science, environmental studies, history), and, in a small minority of schools, much investigatory mathematical work had emerged from extended projects. Language development as well as mathematics had benefited from the oral discussions and the written records of these investigations. Generally, however, the work in most schools tended to be inward-looking and textbook-based with the emphasis on learning skills and techniques and on absorbing factual information, rather than on developing mathematical ways of thinking and reasoning. Pupils would always benefit from meeting mathematical issues within their environment which could provide scope for investigation.

Classroom organization

Classrooms in most *infant* schools and departments were arranged informally with special areas for various aspects of the curriculum,

including mathematics. Conveniently sized groups were formed and, in the early stages, informal friendship groups were most common. As children moved up the school, there was an increasing tendency to group them broadly by ability, but such grouping was generally flexible in operation and considerable movement between groups was allowed. Though the group was usually the teaching unit, occasional class lessons were given and pupils often worked individually or in pairs within the group.

Though class teaching still predominated in many *junior* schools and departments, the grouping of pupils within classes had increasingly found favour. Teachers who had adopted this form of organization considered that it enabled them to be more effective in meeting the needs of individual pupils at various stages of development. In the majority of schools, groups were formed on the basis of ability, though for practical work, friendship groups were often encouraged. The number of groups catered for within a class varied from three to eight. Some teachers preferred to have all groups doing mathematics at the same time; others timetabled a variety of activities for each group on a rotational basis, with not more than two groups undertaking mathematical activities simultaneously. In some classes, group activities were skilfully engineered so that the teacher could give help where it was most needed. Careful structuring took place so that some pupils were involved in activities requiring minimum teacher attention, while the work of others required greater teacher participation. The demands which group organization impose on teachers are considerable, and skilful management is undoubtedly necessary to ensure that situations potentially rich in mathematical ideas are fully exploited.

Class teaching was most common with older classes in the area where the 11-plus mathematics examinations had been retained. Even here, in the majority of classrooms, desks were arranged informally and pupils divided into ability groups. In a substantial minority, however, desks were arranged formally in rows — in some cases because heavy dual desks linger on.

Grouping arrangements certainly helped to provide a pleasant, friendly atmosphere within classrooms which was conducive to discussion between pupils, and between pupils and teachers. Formal classroom organization did not necessarily preclude this vital interaction, but, generally, the constraints imposed by formal organization resulted in pupils playing a far more passive role.

In-service training

Of the 494 teachers in the schools visited, only 65 had studied mathematics beyond GCE Ordinary level. The vast majority did not have a strong mathematical background and many expressed some apprehension about recent innovations. Many felt insecure in the new situation and did not appreciate the relevance of certain topics and methods. These teachers were concerned about the need

for stages of development to be delineated carefully and for standards of achievement to be laid down. The difficulty of marrying practical and formal work, and of linking the work in mathematics with the environment, was also frequently mentioned. Much in-service training has taken place in all three areas. In one area, all but the most recent entrants to the profession had attended an in-service training session in mathematics.

Courses have influenced the work of individual schools to varying degrees. In general, they have been instrumental in widening the curriculum, introducing some new approaches, extending the use of apparatus and producing better displays. The momentum generated by these courses must, however, be maintained if there is to be a fundamental and lasting change of emphasis in pupils' mathematical education. These changes can only take place if teachers in a school reach agreement on their aims and objectives and on the means of achieving them. Much in-service training must, therefore, take place at individual school level. It would be advantageous if a teacher in each school were designated with special responsibility for the work in mathematics, and a course arranged for these 'leaders' where detailed consideration could be given to the mathematics curriculum. The 'leader' would then initiate a series of seminars for his colleagues which would ultimately result in the confident adoption of approaches designed to stimulate children to develop and apply mathematical thinking and reasoning.

Statistics in Schools

FREDA CONWAY
Freda Conway was, until her recent retirement, Senior Lecturer, Social and Economic Statistics, at the University of Salford

There has been much discussion on the place of statistics in schools. Is it part of mathematics or should it be regarded as a new and separate subject?

Within recent years, there have been many committees, study groups and conferences on school statistics. Although everyone seems to agree that more statistics should be taught in schools, there is little agreement on what kind of statistics are required and some doubt as to who should teach it. This failure to determine the place of statistics in the school curriculum is part of the larger problem of determining the relationship between statistics and mathematics, and concerns universities and colleges as well as the schools.

Is statistics part of mathematics or should it be regarded as a new and separate subject? Universities have had more experience of teaching statistics than the schools. In these institutions, statistics has generally been taught in departments of mathematics or social science, or in independent statistics departments within the corresponding faculties. A study of introductory textbooks shows even greater variety. They come with many labels — mathematical statistics, statistical methods, statistics for social scientists, for biologists, for chemists, for geographers, and for many other specialists. Current practice suggests that statistics is not one subject, but many. On the other hand, this variety of courses may only be a stage, and a very necessary stage, in the development of statistics as a new form of applied mathematics.

The need for new forms of applied mathematics is now accepted by many mathematicians. Traditional applied mathematics is concerned with the application of mathematics to the physical sciences, but today, mathematics, and particularly statistics, is used in a wide range of sciences and non-sciences. It is only reasonable that this wide range of applications should be reflected in university and school mathematics courses. Nevertheless, many mathematicians find it harder to accept the idea that new applications of mathematics may require a new type of applied mathematics.

Applications to the social sciences

Since much progress has been made in the teaching of social and economic statistics, it is convenient to use applications to the social sciences to illustrate the requirements of this new type of study.

In any case, many university mathematics departments are anxious to expand into these growth areas, as their supply of science students declines. Also, if the schools are to teach statistics, they will need to teach it in terms of its applications to matters of common knowledge, or what should be common knowledge. The social sciences, together with biology, would seem the most appropriate areas of application.

The social sciences differ in many respects from the physical sciences, and at university level tend to attract students with different mathematical backgrounds. Any applied mathematics based on the social sciences must take account of these differences. It is not unreasonable to suggest that traditional applied mathematics was developed to meet the needs of mathematicians rather than scientists, but any new applied mathematics must also cater for users whose primary interest is in the field of application. The aim of many of these courses must be to teach numeracy to groups of scientists, and it will not be possible to judge the value of these courses solely in terms of their mathematical content.

Numeracy is both a scientific and a mathematical virtue. The study of political arithmetic, which was first developed in the seventeenth century, has been described as 'the art of reasoning with figures upon things relating to government'. Since modern governments have much wider interests than those of earlier centuries, it is only necessary to extend this definition to include mathematical models, as well as figures, to obtain a description of many economic and social statistics courses that are given today. Some of these courses involve very little mathematics, others involve a great deal, but the relevance of these courses for the social scientists who take them depends as much on the nature of the applications as on the level of the mathematics.

Although the mathematical models used in the social and physical sciences may look very similar, they are frequently used to describe very different kinds of phenomena. In many areas of physics, the parameters of these models are constants which can be determined to any required degree of accuracy. But in the social sciences, most models are at best an approximate description of very complex situations. The parameters of these models will certainly vary over time and place, and, in some circumstances, the shape of the best approximation will also change. An understanding of the model necessarily involves an appreciation of changes in the numerical values of the parameters and the range of values of the variables for which the model can be considered valid. In many fields of application, the aim of numeracy can only be achieved by the use of observed data. Traditional applied mathematicians may joke about heavy flies and weightless elephants, but these creatures can serve a useful function in their arguments, and their mythical character deceives no one. Unrealistic social statistics are less easily recognized and consequently are much more dangerous. The use of invented data too often

involves the translation of the personal prejudices of the inventor into numerical terms, so that they become indistinguishable from facts.

Aids for non-mathematicians

Another important change, which must influence the development of any new form of applied mathematics, is the growth in the availability of calculating machines and computers. In practice, these enable non-mathematicians to use highly sophisticated mathematical techniques. Most mathematics teachers tend to argue that you only understand mathematics if you can do it for yourself — but, clearly, regression analysis is being used by many scientists with relatively little understanding of the mathematical theory involved. If the worst mistakes are to be avoided, these scientists must be enabled to understand some of the principles on which these methods are based. The new applied mathematics should make considerable use of 'back of envelopes' techniques, i.e. rough approximations, and various types of graph which could help users to understand the results of computer programmes.

A suitable title for this study might well be empirical mathematics. It takes account of the need to aim at numeracy, and emphasizes the use of mathematics as part of scientific method. Empirical mathematics could include much more than statistics at both university and school level. It signifies a method of approach to mathematics, and not a field of application.

The problems for the schools are in some ways simpler than those for the universities. Schools are subject to more constraints and have fewer options to choose from. It is unlikely that the schools could have sufficient specialist teachers of statistics, even if they wanted them. Teachers of the sciences in which statistics are needed, for example biology, will certainly wish to make use of statistics in their courses. But science teachers have always made use of mathematics as they needed it. This is not a new development. If statistics is to be a subject widely taught in schools, it must be regarded as part of mathematics, and the main responsibility for its teaching must be taken by the mathematics teachers.

Appropriate fields

As already suggested, the most appropriate fields of application for school statistics are biology and the social sciences. Also, since the most obvious characteristic of social and natural groups is the variability between members of the same group, statistics for schools can best be regarded as the mathematics of variation within groups.

A syllabus for school statistics is easily written. Frequency tables, histograms and cumulative frequency curves: measures of average and dispersion: skew and symmetrical distributions: bimodal distributions and heterogeneous data: the association between two variables: scatter diagrams and first ideas of bivariate

regression analysis. Since natural and social populations are generally large, the need for sampling theory and methods is easily demonstrated.

This syllabus may sound simple, but it will not be easy to teach. School statistics certainly requires an empirical approach. Some data can be collected by the pupils themselves, but collecting data is a very time consuming occupation and there is a wealth of information in government publications and textbooks of various kinds. On the other hand, this approach to the teaching of school statistics is in the best tradition of mathematics teaching. Most topics need to be taught as science before being taught as mathematics. Geometry is best taught to beginners as a practical subject involving measurement and experiment. School statistics can be taught in the same way.

35 Beaumont Crescent
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Dear Sir,

I write to correct certain historical inaccuracies in the first section of the article 'The Impact of Science Teaching Projects on Secondary Education' which appeared in TRENDS 1975/1. I was very much involved in the work described in that section, as it concerned the SMA and AWST and later the ASE, so it was particularly disappointing to me to come across factual distortions of that work. I select three of particular significance.

Firstly, the policy statement of 1957 was an entirely SMA production. The AWST was not involved in that hastily prepared publication, which rightly became regarded as just a preliminary draft. Copies were widely circulated and comments were invited, in the light of which the revised — more mature and more generally representative — statement of 1961 was produced, by a committee enlarged to include members from the AWST as well as from the SMA.

Secondly, the title of both the 1957 and 1961 statements was *Science and Education,* not *Science for All.* The latter phrase is sometimes used in conversation, but as a title it denotes the scheme produced in 1916, by the then Association of Public School Science Masters (which broadened into the Science Masters' Association in 1919) and *'All'* there meant only all pupils of public schools. The scheme initiated in 1957 went further, in that it applied to secondary grammar as well as to public schools, but it was only later, as summarized in the Association for Science Education's policy statement of 1965, that the original scheme could be said to have become a complex applicable to *all* school pupils.

Thirdly, following the mention of the three groups (panels) of teachers formed 'to generate syllabuses in biology, chemistry and physics', a fourth is said to have begun work 'on a general preliminary secondary course'. On the contrary, it was a distinctly later panel in the series which did that, its section of the report being published in 1967. The numerically — and officially so named — Fourth Panel compiled the section *Science in Sixth-Form General Education,* which appeared in 1963.

Yours faithfully,

HUGH P. RAMAGE

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Dear Sir,

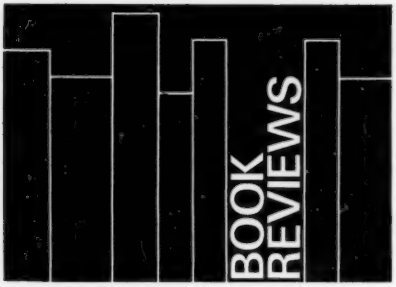
How very refreshing to read such good sense from Harry Judge (TRENDS 1975/2) with regard to the maintenance of 'achievement in the traditional senses of that term' in primary schools. And also in the same issue to be able heartily to agree with P. Turner — a sociologist! — about competition and family responsibility.

Yours faithfully,

M. G. F. LE BLANCQ

Correction

The book review of 'Up to the Mark', pages 57 and 58, TRENDS 1975/2, should have been attributed to Gordon Barratt and not G. Benfield as printed. The Editor apologizes for this error.



Shaping the education of slow learners
W. K. Brennan
Routledge and Kegan Paul
£2·50 (£1·25 paperback)

Wilfred Brennan's book is the first of a new series to be published under the general title of 'Special needs in education'. It deals with the largest group of pupils needing special educational help, namely the slow learners in ordinary schools.

The book sets out to identify the problems and define issues, relating them specifically to the field of research. It is concerned with aims and objectives relevant to formulating a conceptual framework for the shaping of education for slow learners, rather than the indication of actual practical solutions.

First, the responsibility of the ordinary schools is emphasized and some of the difficulties are considered. The numbers, characteristics and treatment of slow learners are studied, and some terms are re-defined, ranging from the familiar one of dullness, backwardness and retardation to the more sophisticated adaptive, corrective and remedial aspects of education with their interrelationships. Finally, guidelines to curriculum are offered, stressing the need for stating aims and objectives, and arguing for a better identification of those curriculum areas where mastery of skills is absolutely essential and those where what is required is a degree of familiarity or awareness rather than pre-occupation with mastering details.

Of the 114 pages, seventeen are given over to an extensive bibliography of research and suggestions for further reading, the latter helpfully classified under topic headings. The readership for whom the book is intended includes teachers, students following courses in special education, educational administrators and parents. The second category is likely to find it particularly useful.

T. I. AMBROSE

Moral education in a secular society
Paul H. Hirst
University of London Press
£3·30 (£1·65 paperback)

Moral education
William Kay
George Allen and Unwin
£4·95 (£2·50 paperback)

Professor Hirst's book is an expansion of his 1974 Convocation lecture for the National Children's Home. It offers a clear and concise account of the views on the nature of morality as essentially to do with having reasons for actions, and moral education as the promotion of reason and objectivity in the young, which he has outlined elsewhere. Drawing upon the argument of Professor R. S. Peters that certain principles—fairness, truth-telling, autonomy, consideration for others' interests—are implicit in the notion of determining action by reasons, Professor Hirst suggests that these principles yield a publicly justifiable agenda for explicit moral education in school. In the ground-clearing discussion on the status of moral judgments which forms the first part of the book, the idea that moral knowledge is inseparable from religious belief is firmly rejected. Not surprisingly, therefore, the author holds that moral education should be carried on independently of religious education: indeed he sees the separation of the two as essential to avoid blurring the vital distinction between the public and verifiable status of moral reasoning and the private, non-verifiable nature of religious belief.

Professor Hirst believes that his account of morality and the separation of religious and moral education will be accepted by those he describes as secular Christians—meaning by the term those believers who recognize the autonomy of morals as also of other areas of man's intellectual and social life. However, they may be less happy with the strong emphasis upon the cognitive elements of moral education (although other elements are mentioned), or with the strictly limited function of objective description which is assigned to religious education in Professor Hirst's programme of 'education within the limits of reason'.

Whereas Professor Hirst writes as a philosopher, Dr. Kay's stance is rather that of social psychologist. Having explored the psychological background in his earlier book *Moral Development*, he reviews and comments upon the sociological evidence in this companion volume, drawing attention to the manifold influences of home, social class, peer group and school upon moral formation. The book provides a wealth of reference to relevant work in sociology and social psychology, but also embraces writers as diverse as Stuart Hampshire and Teilhard de Chardin. However, this is not simply a survey of the academic territory, for Dr. Kay looks in detail at the implications for secondary education (a further work is promised on the early years of schooling) and has some critical observations on existing curriculum materials in moral education. Like Professor Hirst, he sees the promotion of individual autonomy and rationality as among the most important goals of moral education, but lays equal stress upon the cultivation of the affective and responsive components of morality and so describes the goal in terms of 'compassionate reasoning' and 'rational altruism'.

These two books, very different in style and perspective, provide useful additions to the growing body of literature on moral education.

ERIC LORD

Knowledge and the curriculum
Paul H. Hirst
International Library of the Philosophy of Education/Routledge & Kegan Paul
£3·50 (£1·75 paperback)

An introduction to philosophy of education
R. G. Woods and R. St. C. Barrow
Methuen £3·20

The appearance of these two books is timely in view of the current interest in educational objectives, in value judgments, and in curriculum planning.

Knowledge and the Curriculum is a collection of philosophical papers most of which have appeared before as articles in journals from 1965 onwards, and it is very useful to have them available under one set of covers. The topics covered range from a general consideration of the relationship between philosophy and curriculum planning to a detailed consideration of the nature and structure of curricular objectives. Hirst's influential essay on liberal education and the nature of knowledge is included, and there is a new chapter devoted to a philosophical analysis of the concept of curriculum integration. Here Hirst distinguishes between logically different forms of knowledge and subject or discipline differences. In the traditional timetable, the lack of 'fit' between school subjects and fundamental categories of knowledge is very marked: this reinforces the need for curriculum planners to be fully aware of the basic ambiguities of meaning in the concepts of 'a subject' or 'a discipline'. If the existence of separate categories or forms of knowledge is admitted, then the price to be paid for forging links between them may well be a lack of development of understanding within the forms themselves.

This is a volume which deserves a place on the bookshelves of all serious educational thinkers and practitioners. It is perhaps consoling to note that even educational philosophers can nod: on page 113 the separatism of individual subjects is referred to as a discreet enterprise.

In *An Introduction to Philosophy of Education*, the authors offer a series of educational concepts which they subject to analysis and comment: the curriculum, understanding, rationality, indoctrination, child-centred education, creativity and culture. Readers (students on teacher education courses) are invited to think about and discuss these topics in a philosophical manner since, as it is rightly remarked, philosophizing is a skill which cannot be taught except by being practised. Furthermore, it is a skill which can only properly be practised by those who possess the relevant informational background.

The chapter on the curriculum contains an interesting analysis of Hirst's curriculum proposals and his desire to found a concept of education based on the nature of knowledge itself. In the view of the authors, utilitarian principles will always constitute an additional factor: the conclusion therefore is that the philosopher has a part to play in setting the curricular stage but analysis may in fact be of more practical value than epistemology.

W. S. FOWLER

How they fared: the impact of the comprehensive school upon the university
Guy R. Neave
Routledge and Kegan Paul £5·50

A year between school and university
Lea Orr
NFER £1·50 (paperback)

Both these works are useful and interesting because they add to our factual knowledge of the changing educational scene and at the same time they frame conclusions about educational trends which are based upon careful research.

A Year between School and University contains 59 pages, a considerable body of facts and much interest. It is concerned with those who delay their entry to university by at least a year after completing a two-year A-level course. Not only does it identify them as being more men and fewer women, of higher than average social class, likely to be Oxbridge and from independent or direct grant schools, but it also discovers that they enjoy a lower failure rate at university than the direct entry students. However, good results are achieved comparably with the rest. There are well-displayed tables both in the text and the appendices which add a lot of further information.

How They Fared is also a very readable book but it contains 255 pages and must be regarded as a piece of major research. Moreover, it ventures into areas where we have sometimes not had the benefit of reliable factual knowledge on any considerable scale. Inevitably, much public discussion of the results of comprehensive reorganization has been based upon impressions, upon statistics within very limited areas or upon comparisons of situations which are not reliably comparable. Mr. Neave, however, has taken some previous work on the organization of comprehensive schools, with a survey of nearly 1000 ex-comprehensive school students at universities and the university entry data for 1968 and has used them to explain the impact of comprehensive reorganization upon the universities.

His book goes much further than this, however, just as it goes much further than the well-publicized conclusion that secondary reorganization has not resulted in any decline in the proportion of pupils entering universities from maintained schools. Indeed, the importance and interest of this book, particularly to the teacher, the

educational administrator and the policy maker is that it throws light upon the probable consequences, in several directions, of current trends in secondary education. For instance, the 'open sixth form', containing a generous mixture of O-level, A-level and other objectives, in the school where the 'divide' at 16 is of diminished importance, becomes a very significant educational reform because the statistics show a connexion between it and a tendency towards mixed science/arts courses for A-level and also towards science-based degree courses at university.

Mr. Neave considers both the social and academic consequences of several aspects of secondary reorganization in a way which provides both encouragement and warnings for those who plan individual schools and those who plan school systems. Light is thrown upon the possible consequences of de-streaming and of 16 plus transfer upon choice of A-level courses; there is a suggestion that the schools which achieve most in the way of mixed discipline A-level choice are those with the widest range of A-level subjects. This book is mainly about one aspect of the comprehensive school as an enlargement of opportunity. There is much in it which reflects upon the sizes of schools, the way they are run and the age ranges for which they cater. This book is valuable reading for everyone concerned with secondary education.

S. E. GUNN

Apprentices out of their time
Ethel Venables
Faber and Faber £4·95

This would be an important book at any time, but it is particularly relevant to society's concerns in 1975. It is in the first place a follow-up study concerned with 2000 young men aged over 21 in 1966 who had participated in previous studies when they were first-year students in day release classes at various local technical colleges. They were all 'unqualified' school leavers, i.e. they had not obtained the O-level successes entitling them to direct entry to an Ordinary National Certificate class, and most of them had not attempted O-level examinations at all. About 60 per cent were ex-secondary modern school pupils, and at least 90 per cent were engineering apprentices. When all the 2000 or so subjects had had time to become adult workers, it was decided to try and discover what 'serving their time' had meant to them and where their 'journeyings' had led them.

As might be expected from the author, the studies now published combine a highly professional methodology with the capacity to emphasize, without which little of value might have been learnt.

The respondents to this study were in many cases disillusioned with the route they had travelled and wanted an easier and surer route to middle class status for their own children.

The author concludes with a quotation from Alvin Toffler's *Future Shock:*

> Our schools face backwards towards a dying system, rather than forwards to the emerging new society;

and in a comment backed by a lifetime's experience she warns:

> for those who have learned to despise themselves and hate the rest of us for allowing it to happen, the main hope is that they will encounter acceptance and respect before it is too late.

R. M. PRIDEAUX

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